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ABSTRACT

Training older persons to use memory strategies and mnemonic techniques derived from an information processing model of memory has resulted in improvements in performance on specific tasks. Some studies have also shown that the elderly are less likely to use memory techniques than younger persons and that it is the use of techniques that best predicts performance. The effectiveness of memory training classes for normal older adults was evaluated by measuring performance on six memory tasks before and after two types of training, Didactic and Inductive, and comparing the results with two control groups, an activity group and a wait list. Tasks included names and faces, a shopping list, directions, unrelated words, doctor's instructions, and daily tasks. Subjects completed a Memory Complaints Questionnaire to assess subjective memory complaints and two affective measures, the Zung Depression Inventory and the Brief Symptom Inventory. Practice, not training, produced greater results but there was a significant correlation between performance and complaints, and between complaints and depression. Those who complained more performed more poorly and were more depressed. (Author)

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AN EVALUATION OF MEMORY TRAINING CLASSES IN THE
WELL ELDERLY

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Memory is one area where the concerns of older people intersect with the interests of cognitive psychology. The most typical complaints are of forgetting names and misplacing items, and that memory for recent events is poor. Research on memory and aging has consistently shown age differences in performance, particularly in the acquisition of information (Botwinick, 1978; Craik, 1977). Training older persons to use memory strategies and mnemonic techniques derived from an information processing model of memory has been reported to result in improvements in performance on specific tasks (Canestrari, 1968; Hulicka & Grossman, 1967; Hultsch, 1971; Zarit, Gallagher & Kramer, in press). Some studies have shown that the elderly are less likely to use memory techniques than are younger people, and that it is the use of techniques that best predicts performance (Schonfield & Stones, 1979).

While there is general agreement that some age differences in memory exist, discrepancies have been reported between objective test scores and subjective assessments of memory function (Kahn, et al., 1975). One possibility is that these discrepancies are the result of the types of measures used. Most research has employed word lists, but older persons' difficulties in everyday functioning may not be related to that type of task. On the other hand, subjective complaints of poor memory made by older persons have been associated with depression, and with incorrect attribution whereby older persons interpret occasional absent-mindedness as the first sign of senility (Gurland, et al., 1976; Kahn, et al., 1975).

In a recent study using memory "diaries," the number of actual memory problems reported did not differ significantly between old and young; however, the older subjects were more upset by memory failures (Cavanaugh, Grady & Perlmutter, 1979).

In the past, training has been done for one task, using one technique (Canestrari, 1968; Hulicka, et al., 1967). The present study considers several practical memory situations where old people usually have reported problems, emphasizing the use of appropriate strategies for that task. Evaluations were conducted for the extent to which strategies improve memory performance and to clarify determinants of subjective complaints of memory loss.

METHOD

Subjects

Subjects were recruited from the community on a voluntary basis, with ages ranging from 52 to 90. All subjects were screened with the 10-item Mental Status Questionnaire developed by Kahn, et al. (1960), and the Face-Hand test (Bender, 1952; Fink, Green & Bender, 1953), to exclude persons with obvious evidence of senile dementia. Subjects were assigned to either of two treatment groups or two control groups. The treatment groups were designed to test for types of instruction.

Procedure

Didactic instruction consisted of teaching specific optimal memory strategies taken from Lorayne & Lucas (1974). Specific techniques were considered as optimal on particular

tasks, such as categorization on a shopping list. In the Inductive group, subjects were encouraged to develop strategies based on prior experience. Thus there might be three or four alternative strategies to choose from for any one memory task. The first step in the statistical analysis of the results was to evaluate the difference in instruction, and no significant differences were found.

Control conditions were an Activity group, to evaluate the effects of group interaction and a Wait List. The Activity group met for the same one and a half hours, twice a week for four weeks that the trained groups met, but they spent the time doing assertion training exercises and some chair exercises. After post-testing, the Activity group was joined by a Wait List group for an additional five sessions of didactic memory training. Again, the two control groups were statistically evaluated and no significant differences were found between them. Subsequent statistical analyses were done comparing trained vs. control groups, collapsing the Didactic and Inductive into Trained, and the Activity and Wait List groups into the Control group.

Instruments

Tasks that were used included a 15-item shopping list, a 15-item unrelated word list, directions, doctor's instructions, names and faces, and daily tasks. These tasks were developed from laboratory studies of memory and they represented the most common memory complaints of older people. Subjects were asked to enumerate the strategies they used after performing each

task. In addition, a self-report measure of memory complaints was developed which asked persons to rate their subjective memory performance. The Zung Depression Inventory (Zung, 1965) and the Brief Symptom Inventory (Derogatis, et al., 1970) were used to measure affective distress, specifically depression.

RESULTS

A repeated measures multivariate test was done which found a significant three-way interaction between group, measures, and time ($p < .05$). When univariate repeated measures ANOVAs were done, time and time by group interactions were found to be significant on some tasks. The main effect seemed to be practice, with significant time differences for names and faces, shopping list and unrelated words (See Table 1). Training did not prove detrimental to performance, but neither did it consistently improve it. The one exception was the names and faces tasks, where there was a significant time by group interaction, suggesting that training did improve performance. In fact, there were no significant differences in the number of techniques used by the trained and control groups, and the use of techniques best predicted overall performance.

The other focus of this research is subjective complaints about memory, which is why older subjects are motivated to take this class in the first place. There were only inconsistent correlations between performance and complaints, but a consistent relationship between complaints and depression. Persons making more complaints about their memory sometimes

performed more poorly on tasks, but they also reported more symptoms of depression.

DISCUSSION

Memory is a highly charged subject for older persons. These findings suggest manipulating the learning situation may not be the most productive way of studying normal aging and memory. The results showed that training in techniques may not have been as important as practice and nonspecific group effects, as evidenced by the Control group showing similar improvement from pre- to post-testing. Irrespective of training, subjects generally performed quite well on the measures despite their complaints. On doctor's instructions, for example, the means were 10 out of 12 at pre-testing, leaving little room for improvement. These practical measures may have been more familiar than the typical laboratory word list and therefore might have been easier for subjects. It is also possible that older persons know an adequate number of techniques, but do not choose to use them in real-life situations.

In studying memory and aging a broader context is needed, one which includes expectations about aging, relevancy of the task, and mood. The findings further supported the existing evidence of a relationship between complaints of poor memory and affective status. But memory classes should not be considered as a panacea, nor as a treatment for depression, based on these results. They are very popular, nonetheless.

but their popularity seemed to stem from the opportunity to meet people with similar problems and getting the reassurance that such problems are universal.

Memory classes for older persons may be a service that can be provided in various settings, such as senior centers, community mental health centers, or retirement hotels. The effects should be thought of as primarily educational, about memory and aging and about the use of techniques, especially in so far as they address the practical memory concerns of participants. It may be that learning of the universality of memory concerns and knowledge of techniques is far more important than the actual implementation of strategies on memory tests.

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TABLE 1. Comparison of Mean Performance Scores for Treatment and Control Groups at Time 1 and Time 2

	<u>Trained</u>	<u>Control</u>
Names and Faces ^{1,2}		
Time 1	8.06	8.67
Time 2	10.49	8.51
Shopping List ¹		
Time 1	10.56	10.33
Time 2	11.86	11.21
Directions		
Time 1	8.08	7.86
Time 2	8.69	8.05
Unrelated Words ¹		
Time 1	9.54	9.41
Time 2	11.14	10.23
Doctor's Instructions		
Time 1	10.17	10.23
Time 2	10.06	10.62
Daily Tasks		
Time 1	10.51	10.64
Time 2	11.31	10.45

¹Significant Time effect less than .05

²Significant Time by Group Interaction less than .05